## **ABSTRACT**

The invention relates to a waste heat steam generator of a gas fired and steam powered generator. Said generator comprises a waste heat boiler to which exhaust gas of a gas turbine can be supplied. Said steam generator also comprises at least one evaporator which is located in the waste heat boiler and is used to produce process steam for a steam turbine. According to the invention, flue gas from a heating device can be supplied to the waste heat boiler and at least part of said flue gas can be extracted at at least one point of the waste heat boiler and redirected back to the inlet of said waste heat boiler.